

Please amend the claims in accordance with the following rewritten claims in clean form. Applicant includes herewith an Attachment for Claim Amendments showing a marked up version of each amended claim.

Q ~~Sub B1~~ 1. (Amended) A resonator comprising:
a columnar shielding case composed of a conductive material; and
a dielectric filled in the shielding case, the resonator using a resonant mode causing generation of a current crossing a corner of the columnar shielding case.

2. (Amended) the resonator of Claim 1, the resonator using a TM mode, wherein the dielectric includes a center portion and an outer portion covering at least part of the center portion, and the dielectric constant of the center portion is higher than the dielectric constant of the outer portion.

3. (Amended) The resonator of Claim 1, wherein the columnar shielding case is in a shape of a cylinder or a square pole.

4. (Amended) The resonator of Claim 1, wherein the shielding case is a metallized layer formed on the surface of the dielectric.

~~Q~~ ~~Sub B1~~ 6. (Amended) A resonator using a TM mode, the resonator comprising:
a case composed of a case body and a lid;
a dielectric fixed therein;

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an elastic layer sandwiched between the lid and the case body; and
conductive foil sandwiched between the elastic layer and the case body,
wherein lower and upper ends of the dielectric are respectively fixed to an inner
face of a bottom of the case body and the conductive foil in contact therewith.

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12. (Amended) A radio frequency filter comprising:
a case body and a lid respectively composed of a conductive material;
a dielectric fixed therein, wherein a coaxial connector is placed on an outer
surface of the case body,
a center conductor of the coaxial connector extends through an inner portion of
the case body,
one end of a conductor probe is connected to the center conductor, and
another end of the conductor probe is connected to the lid.

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14. (Amended) A radio frequency filter having a resonator using a TM mode,
the resonator comprising:
a case composed of a case body and a lid;
a dielectric fixed therein;
a case for housing the dielectric;
an elastic layer sandwiched between the lid and the case body; and
a conductive foil sandwiched between the elastic layer and the case body,
wherein lower and upper ends of the dielectric are respectively fixed to an inner
face of a bottom of the case body and the conductive foil in contact therewith, and

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part of the case is constructed of conductive foil and the conductive foil partly shields the dielectric electromagnetically.

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16 (Amended) A radio frequency filter having a plurality of resonators at least including an input-stage resonator having a dielectric and receiving a radio frequency signal from an external device and an output-stage resonator having a dielectric and outputting a radio frequency signal to an external device, the radio frequency filter comprising:

a case surrounding the plurality of resonators for electromagnetically shielding the respective resonators,

wherein each of the input-stage resonator and the output-stage resonator comprise:

- (a) a case body and a lid;
 - (b) a dielectric fixed therein;
 - (c) an elastic layer which is sandwiched between the lid and the case body;
- and

(d) conductive foil which is sandwiched between the elastic layer and the case body,

(e) wherein lower and upper ends of the dielectric are respectively fixed to an inner face of the bottom of the case body and the conductive foil in contact therewith,

a partition formed between resonators of which electromagnetic fields are coupled with each other among the plurality of resonators;

an input-stage coupling window formed at the partition; and

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an input-stage coupling degree adjusting member made of a conductor rod for adjusting the area of the inter-stage coupling window.

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